

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A method of manufacturing a roofing shingle comprising the steps of:

coating a continuously supplied shingle mat with roofing asphalt to make an asphalt coated sheet;

applying a first portion of granules onto the asphalt coated sheet, wherein the first portion contains substantially no anti-microorganism granules;

applying a second portion of granules over the first portion of granules, wherein the second portion of granules comprises granules and anti-microorganism granules; and

removing the granules and anti-microorganism granules which are not adhered to the asphalt coated sheet.

2. (Withdrawn) The method according to Claim 1, wherein the step of applying a first portion of granules includes the step of controlling the amount of the first portion of granules applied to the asphalt coated sheet so that the first portion of granules constitutes a first predetermined percentage of the total volume of all granules in the first and second portions of granules which ultimately adhere to the asphalt coated sheet.

3. (Withdrawn) The method according to Claim 2, wherein the first predetermined percentage is within the range of from about 20 percent to about 50 percent of the total volume of all granules which ultimately adhere to the asphalt coated sheet.

4. (Withdrawn) The method according to Claim 1, wherein the step of applying a second portion of granules includes the step of controlling the amount of anti-microorganism granules in the second portion of granules so that the anti-microorganism granules constitute a second predetermined percentage of the total volume of all granules in the second portion of granules which ultimately adhere to the asphalt coated sheet.

5. (Withdrawn) The method according to Claim 4, wherein the second predetermined percentage is within the range of from about 6 percent to about 12 percent of the total volume of all granules in the second portion of granules which ultimately adhere to the asphalt coated sheet.

6. (Withdrawn) The method according to Claim 1, wherein the anti-microorganism granules include copper granules.

7. (Withdrawn) The method according to Claim 1, wherein the first portion of granules comprises background granules.

8. (Withdrawn) The method according to Claim 1, wherein the step of applying a first portion of granules includes applying the first portion of granules such that the roofing asphalt envelops a predetermined percentage of the first portion of granules.

9. (Withdrawn) The method according to Claim 8, wherein the predetermined percentage of the first portion of granules is within the range of from about 70 percent to about 80 percent.

10. (Withdrawn) The method according to Claim 1, wherein the step of applying a second portion of granules includes applying the second portion of granules such that the roofing asphalt envelops a predetermined percentage of the anti-microorganism granules.

11. (Withdrawn) The method according to Claim 10, wherein the predetermined percentage of the anti-microorganism granules is within the range of from about 0.0 percent to about 5.0 percent.

12. (Withdrawn) The method according to Claim 1, further including the step of applying a third portion of granules over the second portion of granules.

13. (Withdrawn) The method according to Claim 11, wherein the third portion of granules comprises background granules.

14. (Withdrawn) The method according to Claim 1, wherein the anti-microorganism granules have a diameter within a range of from about 1.2 mm to about 1.7 mm.

15. (Currently Amended) A roofing shingle manufactured in accordance with the steps of:

coating a continuously supplied shingle mat with roofing asphalt to make an asphalt coated sheet, the asphalt coated sheet having an upper asphalt coated portion positioned above the mat and a lower asphalt coated portion positioned below the mat, the upper asphalt coated portion having an upper surface portion positioned at the top of the upper asphalt coated portion;

depositing a first portion of granules onto the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet, the first portion of granules being substantially positioned within the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet, wherein the first portion of granules contains substantially no anti-microorganism granules;

dispensing a second portion of granules over the first portion of granules, wherein the second portion of granules comprises a mixture of granules and anti-microorganism granules; and

removing the granules and anti-microorganism granules which are not adhered to the asphalt coated sheet.

16. (Currently Amended) A roofing shingle comprising:
an asphalt coated sheet having a substrate, an upper asphalt coated portion positioned above the substrate and a lower asphalt coated portion positioned below the substrate, the upper asphalt coated portion having an upper surface portion positioned at the top of the upper asphalt coated portion;

a first portion of granules deposited onto the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet, the first portion of granules being substantially positioned within the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet, wherein the first portion contains substantially no anti-microorganism granules; and

a second portion of granules dispensed over the first portion of granules, wherein the second portion of granules comprises a mixture of granules and anti-microorganism granules, and wherein the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet envelops a predetermined percentage of the anti-microorganism granules.

17. (Currently Amended) The roofing shingle according to Claim 16, wherein the predetermined percentage of the anti-microorganism granules enveloped by the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet is within the range of from about 0.0 percent to about 5.0 percent.

18. (Currently Amended) The roofing shingle according to Claim 16, wherein the roofing asphalt upper surface portion of the upper asphalt coated portion of the asphalt coated sheet envelops within the range of from about 70 percent to about 80 percent of the first portion of granules.

19. (Withdrawn) A method of manufacturing a roofing shingle comprising the steps of:

coating a continuously supplied shingle mat with roofing asphalt to make an asphalt coated sheet; and

applying a portion of granules onto the asphalt coated sheet, wherein the portion of granules comprises roofing granules and anti-microorganism granules, and wherein the anti-microorganism granules have a diameter within the range of from about 1.2 mm to about 1.7 mm.

20. (Withdrawn) The method according to Claim 19, wherein the step of applying a portion of granules includes the step of controlling the amount of anti-microorganism granules so that the anti-microorganism granules constitute within the range of from about 6 percent to about 12 percent of the total volume of all granules in the portion of granules which ultimately adhere to the asphalt coated sheet.

21. (Withdrawn) The method according to Claim 19, wherein the anti-microorganism granules include copper granules.

22. (Withdrawn) The method according to Claim 19, wherein the step of applying a portion of granules includes applying the portion of granules such that the roofing asphalt envelops within the range of from about 0.0 percent to about 5.0 percent of the anti-microorganism granules.

23. (Currently Amended) A roofing shingle manufactured in accordance with the steps of:

coating a continuously supplied shingle mat with roofing asphalt to make an asphalt coated sheet, the asphalt coated sheet having an upper asphalt coated portion positioned above the mat and a lower asphalt coated portion positioned below the mat, the upper asphalt coated portion having an upper surface portion positioned at the top of the upper asphalt coated portion;

depositing a first portion of granules onto the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet, the first portion of granules being substantially positioned within the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet, wherein the first portion contains substantially no anti-microorganism granules; and

dispensing a second portion of granules over the first portion of granules, wherein the second portion of granules comprises a mixture of granules and anti-microorganism granules, and wherein the anti-microorganism granules have a diameter within the range of from about 1.2 mm to about 1.7 mm.

24. (Currently Amended) The shingle according to Claim 15, wherein the step of applying a first portion of granules includes the step of controlling the amount of the first portion of granules applied to the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet so that the first portion of granules constitutes a first predetermined percentage of the total volume of all granules in the first and second portions of granules which ultimately adhere to the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet.

25. (Currently Amended) The shingle according to Claim 24, wherein the first predetermined percentage is within the range of from about 20 percent to about 50 percent of the total volume of all granules adhered to the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet.

26. (Previously Presented) The shingle according to Claim 15, wherein the anti-microorganism granules include copper granules.

27. (Currently Amended) The shingle according to Claim 15, wherein the step of applying a first portion of granules includes applying the first portion of granules such that the ~~roofing asphalt~~ upper surface portion of the upper asphalt

coated portion envelops a predetermined percentage of the first portion of granules.

28. (Previously Presented) The shingle according to Claim 27, wherein the predetermined percentage of the first portion of granules is within the range of from about 70 percent to about 80 percent.

29. (Currently Amended) The shingle according to Claim 15, wherein the step of applying a second portion of granules includes applying the second portion of granules such that the ~~roofing asphalt~~ upper surface portion of the upper asphalt coated portion envelops a predetermined percentage of the anti-microorganism granules.

30. (Previously Presented) The shingle according to Claim 29, wherein the predetermined percentage of the anti-microorganism granules is within the range of from about 0.0 percent to about 5.0 percent.

31. (Currently Amended) The shingle according to Claim 16, wherein the amount of anti-microorganism granules in the second portion of granules is controlled so that the anti-microorganism granules constitute a second predetermined percentage of the total volume of all granules in the second portion of granules which ultimately adhere to the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet.

32. (Currently Amended) The shingle according to Claim 31, wherein the second predetermined percentage is within the range of from about 6 percent to about 12 percent of the total volume of all granules in the second portion of granules which ultimately adhere to the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet.

33. (Previously Presented) The shingle according to Claim 16, wherein the anti-microorganism granules include copper granules.

34. (Previously Presented) The shingle according to Claim 16, wherein the first portion of granules comprises background granules.

35. (Previously Presented) The shingle according to Claim 16, wherein the shingle includes a third portion of granules dispensed over the second portion of granules.

36. (Previously Presented) The shingle of Claim 35, wherein the third portion of granules comprises background granules.

37. (Previously Presented) The shingle of Claim 16, wherein the anti-microorganism granules have a diameter within the range of from about 1.2 mm to about 1.7 mm.

38. (Currently Amended) A roofing shingle manufactured in accordance with the steps of:

coating a continuously supplied shingle mat with roofing asphalt to make an asphalt coated sheet, the asphalt coated sheet having an upper asphalt coated portion positioned above the mat and a lower asphalt coated portion positioned below the mat, the upper asphalt coated portion having an upper surface portion positioned at the top of the upper asphalt coated portion;

depositing a first portion of prime granules onto the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet, wherein substantially all of the first portion remains positioned within the upper surface portion of the upper asphalt coated portion and contains substantially no anti-microorganism granules;

dispensing a second portion of granules over the first portion of prime granules, wherein the second portion of granules comprises a mixture of prime granules and anti-microorganism granules; and

removing the prime granules and anti-microorganism granules which are not adhered to the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet.

39. (New) A roofing shingle comprising:

an asphalt coated sheet having a substrate, an upper asphalt coated portion positioned above the substrate and a lower asphalt coated portion positioned below the substrate, the upper asphalt coated portion having an upper surface portion positioned at the top of the upper asphalt coated portion;

a first portion of granules deposited onto the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet, wherein substantially few of the first portion of granules extend in a downward direction beyond the upper surface portion of the upper asphalt coated portion, wherein the first portion contains substantially no anti-microorganism granules; and

a second portion of granules dispensed over the first portion of granules, wherein the second portion of granules comprises a mixture of granules and anti-microorganism granules, and wherein the upper surface portion of the upper asphalt coated portion of the asphalt coated sheet envelops a predetermined percentage of the anti-microorganism granules.